

PLASMA ASHING PROCESS

ABSTRACT

An oxygen-free and nitrogen-free plasma ashing process for removing photoresist in the presence of a low k material from a semiconductor substrate. The process includes forming reactive species by exposing a plasma gas composition to an energy source to form plasma. The plasma gas composition is free from oxygen-bearing and nitrogen-bearing gases. The plasma selectively removes the photoresist from the underlying substrate containing low k material by exposing the photoresist to the reactive species. The process can be used with carbon and/or hydrogen based low k dielectric materials.